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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,647	08/28/2003	LeRoy L. Whinnery JR.	SD-8466	1670
20567	7590	01/19/2006	EXAMINER	
SANDIA CORPORATION P O BOX 5800 MS-0161 ALBUQUERQUE, NM 87185-0161			COONEY, JOHN M	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 01/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/652,647

Applicant(s)

WHINNERY ET AL.

Examiner

John m. Cooney

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) 19-38 and 60-63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18, 39-59 and 64-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to:
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2 shfts.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Election/Restrictions***

Applicant's election without traverse of Group 1 in the reply filed on 11-3-05 is acknowledged.

Claims 19-38 and 60-63 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11-3-05.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' supporting disclosure provides no

Art Unit: 1711

description of a lightweight polyisocyanurate foam composition which comprises an epoxide resin, an isocyanate resin, tertiary amine catalyst, and cyclic amine as claimed. Rather, applicants' disclosure is supportive of a polyisocyanurate foam composition resulting from the mixing and reacting the materials identified.

Claims 3, 4, 41, and 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' supporting disclosure provides no description of a epoxide resin which is a mixture of bisphenol A or F and epichlorohydrin. Rather, applicants' disclosure is supportive of a epoxide resins which are the reaction product of bisphenol A or F and epichlorohydrin.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1711

Claims 1-18, 39-59, and 64-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayash, Jr. et al. (3,673,128), alone, or in view of Fuzesi et al. (4,699,931) and/or Whinnery et al. TEPIC document (Whinnery et al.).

Hayash, Jr. et al. discloses preparations of oxazolidone-modified isocyanurate foams prepared by mixing and reacting polyisocyanates and epoxide resins in the presence of catalysts, surfactants, blowing agents inclusive of water and other propellants, and additives (see abstract, column 2 line 10- column 8 line 50, as well as, the entire document). Hayash, Jr. et al. discloses combination of the epoxy resins and polyisocyanates in amounts meeting the ranges of combinational values set forth by applicants' claims. Further, regarding the product-by-process recitations of applicants' claims, the resultant epoxy resin/polyisocyanate based foamed polymers of Hayash, Jr. et al. are of a formed structure having no apparent factually supported, non-obvious differences from the formed products of applicants' claims that burden is upon applicants' to demonstrate any unobvious differences in the product which may be evident based on the process recitations of the claims.

Hayash, Jr. et al. differs from applicants' claims in that combinations of tertiary amine catalysts inclusive of cyclic amines are not required or, specifically, blends of 2,4,6-tris(dimethylaminomethyl)phenol and N,N-dimethylcyclohexylamine and/or relative amounts values as claimed. However, Hayash, Jr. et al. (see column 7 lines 47 and 55) discloses employment of these compounds in the preparations of Hayash, Jr. et al. for the purpose of imparting their reaction catalyzing effects. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the disclosed

Art Unit: 1711

2,4,6-tris(dimethylaminomethyl)phenol and N,N-dimethylcyclohexylamine catalyst of Hayash, Jr. et al. in combinations of varied respective individual contents within the teachings of Hayash, Jr. et al. for the purpose of imparting their disclosed reaction catalyzing effects in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Additionally, regarding the blending of the tertiary amine with the cyclic amine, it has been held that is prima facie obvious to combine two compositions, each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. *In re Kerkhoven* 205 USPQ 1069.

The idea for combining said compositions flows logically from their having been individually taught in the prior art. *In re Crockett* 126 USPQ 186, 188. Relatedly, the fact that a first component is in no way related to the second component, but where each has the same utility, does not detract from the obviousness of combining them. *In re Linder*, 457 F.2d 506, 507 (CCPA 1972). (Holding that it would have been obvious to combine two known dispersants, since one skilled in the art would have expected a mixture of such dispersants to also be a dispersant).

Hayash, Jr. et al. differs from applicants' claims in that glycidyl ethers of Bisphenol A or F are not particularly required. However, Hayash, Jr. et al. indicates these materials to be acceptable members of one of the preferred groups of members used in the practice of their invention(see column 4 line 32-34 and column 6 lines 69-70). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed glycidyl ethers of Bisphenol A or F disclosed by Hayash, Jr. et al. in the

Art Unit: 1711

making of the preparations of Hayash, Jr. et al. for the purpose of imparting their epoxy resin functional effect in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results. It is prima facie obvious to substitute equivalents, motivated by the reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances. *In re Ruff* 118 USPQ 343; *In re Jezei* 158 USPQ 99; the express suggestion to substitute one equivalent for another need not be present to render the substitution obvious. *In re Font*, 213 USPQ 532. Additionally, though epichlorohydrin is not particularly recited to be the species used in the glycidylation of the polynuclear phenols of Hayash, Jr. et al. such is not seen to be a point of distinction as Hayash, Jr. et al. recites their materials to be glycidyl ethers and difference based on the formed epoxy resin is not seen or demonstrated in fact. Regardless, column 5 lines 3-5 of Hayash, Jr. et al. demonstrates epichlorohydrin to be a conventional means of converting non-fused phenols to glycidyl ethers. Accordingly, employment of this species in the making of the Bisphenol glycidyl ethers of Hayash, Jr. et al. with the expectation of success in the absence of a showing of new or unexpected results.

Hayash, Jr. et al. further differs from applicants' claims in that additives as claimed are not particularly employed. However, Hayash, Jr. et al. does disclose the employment of additives in their preparations (column 8 lines 37-40), and Fusezi et al. (see column 11 line 63 – column 12 line 2) and Whinnery et al. (pages 8-10) disclose the employment of various fillers inclusive of the inorganic and organic fillers, acrylonitrile copolymers, and glass microbeads of applicants' claims in the making of

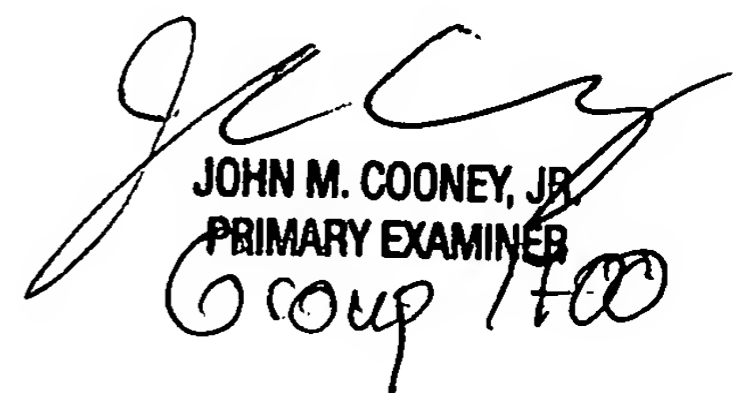
Art Unit: 1711

closely related foam preparations for the purpose of imparting their bulking and strengthening effects. Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the additive/filler materials of Fusezi et al. and Whinnery et al. in the preparations of Hayash, Jr. et al. for the purpose of imparting their bulking and strengthening effects in order to arrive at the products of applicants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Cooney whose telephone number is 571-272-1070. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck, can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JOHN M. COONEY, JR.  
PRIMARY EXAMINER  
Group 170